



## SPECIFICATION

### SPIRAmir® SELF SEALING ROUND DUCT SYSTEMS

#### I. GENERAL

All round ductwork inclusive of supply, return and exhaust shall be SPIRAmir® as manufactured by SPIRAmir® Alliance companies or approved equal. Each round fitting shall use moveable O-Ring Gasket which rotates naturally and easily between the two grooves while going over a series of teeth placed on the ends of the fitting. If installed in accordance with manufacturer's instructions, all duct joints will be sealed without the use of duct sealer or duct tape.

#### II. MATERIAL

All duct and fittings shall be:

1. G60 or better Galvanized steel conforming to ASTM A653/A924.
2. Stainless Steel 304/2B and 316/2B conforming to ASTM A240.
3. Aluminum 3003-H14.
4. PVC coated steel 4x1 underground, 4x4 aboveground and 4x1 reverse.

#### III. CONSTRUCTION

##### 1. Metal Gauges

Unless otherwise stated, gauges for all round duct and fittings shall be per SMACNA's Duct Construction Standards as shown in the following table:

Diameter (inches)	Galv./S.S. Spiral Pipe	Fittings/Rolled Pipe
4 – 14	26	24
16 – 26	24	22
28 – 36	22	20
38 - 48	20	20

##### 2. Fittings

- a. All fittings shall be factory equipped with an O-Ring Gasket at each end which rotates naturally between two grooves and a set of teeth.

- b. Gasket shall be sized such that it insures the tightness of the joint when the fitting is inserted into the pipe.
- c. Gasket shall conform to UL723 and NFPA255 standards producing a flame spread index of zero (0) and smoke developed index of zero (0).
- d. All fittings shall meet SMACNA's medium Pressure / high velocity requirement of +10 in. W.G., and shall be manufactured by using one or more of the following construction methods:
  - Overlapped and stitch welded along the entire length of the fitting.
  - Standing seam gorelocked.
  - Button punched and internally sealed.
  - Spot welded and internally sealed.
- e. All elbows 4"Ø thru 12"Ø shall be two pieces die stamped, stitch welded from end to end. All elbows 14"Ø and larger shall be stitch welded and standing seam gorelocked construction.
- f. Elbows shall have a centerline radius of 1.5 or 1.0 times the elbow diameter unless otherwise specified by the design engineer.

##### 3. Pipes

Pipe shall be manufactured by using one or more of the following methods:

- a. Spiral lock seam construction.
- b. Rolled construction continuously stitch welded along the entire length of the pipe.

##### 4. Joint Connections

All joint connections shall meet or exceed SMACNA'S leakage class 3 requirement, per SMACNA's Duct Design Manual from -12" W.G. to +12" W.G., and shall be made by using the following ways:

- a. Duct-to-duct connections are made by using a pipe coupling.
- b. Fitting-to-duct connections are made by inserting fitting into the duct.
- c. Fitting-to-fitting connections are made by using a fitting coupling.